Most sites require two separate readers using different frequencies, and some installations have as many as 16 or more readers. Reliable operation of multiple readers within a given area requires that readers be separated in frequency and in some cases time multiplexed to avoid mutual interference. Specifically, when readers are relatively close, separations of 1 - 2 MHz are needed between any adjacent reader.

AMTECH technology is unlikely to receive interference from hyperbolic multilateration (HML) systems such as PacTel's. To date, AMTECH installations have received no interference from operating Teletrac systems. Conversely, AMTECH has worked diligently to cooperate in the use of spectrum so as to minimize interference to PacTel.

II. THE TYPES OF USES OF THE AMTECH TECHNOLOGY

A. Traffic Management and Highway Toll

Use of AMTECH's AVM technology for traffic management and highway toll systems typically involves installation of readers at points on highways, including at toll lanes. Tags are placed inside a vehicle's windshield, typically attached by Velcro®. They are illuminated and then "read" by readers as they pass in close proximity.

Often, the AMTECH system is used for toll collection. For example, on the Dallas North Tollway -- completely outfitted with AMTECH's system -- a vehicle equipped with a tag is identified by a reader as the vehicle enters a toll lane. This identification is passed to a computer, which determines the validity of the device for use at that toll facility and, in turn, causes signal lights, alarms, or gates to be activated based upon the validity tests. If the tag is valid, the vehicle's identification is stored, and the user's prepaid account is debited by the amount of the toll.[7] The result is a non-stop, cashless passage by the vehicle through the toll plaza. Not only does this save time for the user, reducing traffic congestion, it also conserves fuel and

---

[7] Systems can also be configured to provide for later billing.

contributes to reduced automobile emissions. The Oklahoma Turnpike system is still more efficient. Cars equipped with an AMTECH tags need not even slow down or pass through a toll gate: overhead readers on high-speed open highway lanes direct signals down toward cars to illuminate and read the tag.

Besides toll collection, the AMTECH technology is increasingly used in intelligent vehicle-highway system (IVHS) and traffic management applications. AMTECH systems using readers on bridges and other structures can track traffic patterns to provide a central location with accurate information on accidents and congestion. Such information can be used to change road signs, modify traffic signal patterns, or even to re-route vehicles. Such a project using AMTECH's technology is now underway in the Houston metropolitan area. The California Department of Transportation has issued a request for proposals (RFP) for the largest U.S. IVHS application to date, ATCAS, covering -- eventually -- all vehicles in California. Given substantial existing traffic problems in that State, such an IVHS system carries the immense potential to improve transportation efficiency and reduce auto emissions.

Highway applications such as IVHS and toll collection are also rapidly converging. Obviously, readers in toll lanes will, in addition to collecting tolls, measure traffic volume, thereby providing highway management information. AMTECH believes that highway systems of the future will combine toll and traffic management applications making traffic management relatively inexpensive.

AMTECH has already installed highway or toll readers at more than 400 sites worldwide. These systems already serve over 400,000 roadway vehicle users. Many of those users, such as commuters, rely on AMTECH technology every business day.

B. Rail

One of the most significant problems facing railroads today is monitoring and controlling rail rolling stock. Rail cars are often pulled by locomotives that track over lines owned by a company different than the ownership of the car. This results in enormous problems in the efficient management of rail stock, including outright lost rail cars.

Traditional methods for identifying locomotives and rail cars require a clerk or video camera manually to record identification numbers and then enter those data by hand into a computer. This system is inherently subject to delays and errors. A more recent, but severely flawed identification method, which was tried for several years, relied on "bar code" systems; however, problems of reading in inclement weather, maintenance, and the restricted amount of information that can be contained in large bar code panels limited its effectiveness. For this reason, the global rail industry increasingly has turned to AVM systems such as AMTECH.

There are two principal applications of AMTECH technology within the rail transportation segment. The first is automatic equipment identification (AEI) systems, which AMTECH and its distributors have been installing since 1986. This permits a railroad to install tags on locomotives and rail cars and to install readers at rail terminals and selected intermediate points. As the locomotive or rail car passes the reader, the reader retrieves the identification information and monitored status information in the tag and forwards this information to the railroad's computer network. In "read-write" AEI systems, the reader can also "write" new data into the tag. The AMTECH system thus permits railroads to gather and disseminate data on a complete, accurate and current basis, resulting in better customer service and improved asset utilization.

In 1991, the Association of American Railroads (AAR) established a new AVM standard for virtually all North American rail cars.[8] The standard is based on the AMTECH technology and is expected to be implemented fully by 1995. The AAR standard is mandatory and applies to cars in Canada, Mexico and the United States. AAR and the railroads have already installed approximately 500 reader sites and 1,000,000 tags (predicted to be over 1,500,000 by year end). When the system is fully implemented, some 1.4 million pieces of rolling stock will be tagged with two tags ensure orderly flow of rail traffic on heavily traveled rail lines. AMTECH predicts that such systems will be increasingly examined in the United States; AMTECH technology already is employed for ATC in Europe and Australia.

Both applications carry the potential of saving the rail industry tens of millions of dollars per year. The amount of savings jumps still further when rail AEI implementation is married to intermodal transportation AVM, discussed below.

C. Intermodal

Increasingly, AMTECH technology is used by the shipping, railroad, and trucking industries to facilitate the transport of goods worldwide using freight equipment -- containers, chassis, and tractors -- that can be carried on a variety of transportation media, called intermodal shipping. At present, there are over 6 million such containers, of which 60 percent transit the United States in any given year. Using the AMTECH AVM technology, a firm engaged in intermodal transportation can install tags on its containers, chassis, tractors, and generator sets, permitting readers at points of transfer and storage automatically to identify and obtain information about equipment moved among ship, rail, truck or other means of transportation and an intermodal container yard. An intermodal transporter can also track and inventory the containers within a yard.

Such operations are consistent with the increasing integration of all facilities involved in the movement of goods. In fact, the AMTECH system permits "seamless" aircraft involved between its point of origin and destination. As an example, through the use of six readers in close proximity, complete tracking information (including the direction of travel) can be obtained at the highest of rail car speeds regarding a dual-container stacked rail "flat" car.

Through the use of software designed for the purpose, AMTECH can relay the data collected by the readers to its customers, enabling carriers, shippers, and consignees to obtain accurate and timely information about the status and location of presently tagging their entire fleet of containers and equipping terminal reader sites at over 130 locations worldwide.

D. Trucking and Fleet Management

Another important market for AMTECH's equipment is vehicle fleet management and access control. As with the rail and intermodal markets, electronic identification of tractors, trailers, containers, converter dollies and related equipment allows fleet operators to increase productivity, improve equipment utilization, eliminate clerical and data errors, and enhance service to the public. In short, AMTECH allows the surface transport market to control its assets more effectively.

Already, AMTECH is serving common, contract and specialized motor carriers, transit systems, taxicabs, police cars and courier services. Automatically identifying equipment as it arrives at a yard or terminal results in accurate and timely information for dispatch, yard operations, customer information services, and preventive maintenance. In some cases, scale weight and unit identification can be automatically combined to evaluate compliance with highway weight limits and the assessment of any user fees.

In August 1990, the American Trucking Associations (ATA) approved a voluntary standard for automatic identification of tractors, trailers and related equipment.[11] The standard is compatible with the AMTECH equipment, and is also compatible with the rail standards approved by AAR and the intermodal shipping

[11] American Trucking Associations, Standard for Automatic Equipment Identification (May 16, 1990).

standard of the ISO. These compatible standards further reinforce the "seamless" market for tracking the international movement of goods, how ever they may travel, and at present, several trucking and surface transportation providers rely on AMTECH equipment. Numerous readers have been installed throughout the U.S, and more than 60,000 trucks have been tagged. AMTECH expects this market to grow, particularly as the ATA standard is implemented.

AMTECH's AVM system saves time, simplifies road use, provides tax recordkeeping and lowers operating costs to shippers and public agencies. As one example, AMTECH's system permits the ready identification of trucks hauling hazardous material, potentially improving highway safety or permitting public safety officials more rapidly to assess the consequences of a transportation accident.

AMTECH technology is also valuable for controlling vehicular access to restricted areas. Access control applications include gated communities, parking lots and military bases. Of course, access control can be combined with other information, so that user tags transmit information about the length and status of a trip as a truck rolls into the freight yard.

E. Air Transport

The AMTECH technology has many applications involving the air transport industry. In particular, airlines typically use so-called unit load devices (ULDs) as a standard pallet for transport of freight and baggage in aircraft holds. AMTECH's technology is compatible with a voluntary recommended practice for electronic identification of airfreight containers worldwide. This standard, established by the International Air Transport Association (IATA),[12] is intended to harmonize electronic identification of ULDs throughout the world.

Beyond this, AMTECH products are already in use at numerous airports throughout the country to improve vehicular safety, security and efficiency in at least two ways. First, airport authorities carefully control the vehicles that have access to gate, runway and tarmac areas. AMTECH systems allow precise identification of such vehicles at a given location and can control gates and traffic signals. Second, AMTECH systems have been used to streamline taxi queues by automatically identifying valid taxicabs, decreasing taxi congestion in airport areas, and billing for any user fees. Airports also use AMTECH systems to manage, track, and bill other commercial vehicles. More than 14,000 AMTECH tags have been installed to meet such airport needs at, among others, Los Angeles International, John F. Kennedy, Ontario, Salt Lake City, Seattle-Tacoma, Miami, and Dallas-Ft. Worth Airports.

F. Other

In addition to the foregoing, the AMTECH technology has several other possible uses that, although not yet implemented, promise tremendous improvements in business efficiency and safety. One of the most obvious is the use of modulated backscatter readers and tags for personal access control, a use the Commission may not have predicted when establishing its AVM licensing regulations. As noted above,

---

[12] IATA Recommended Practice RP 1640 (1991).

AMTECH systems already perform access control at airports for vehicles. The system could be easily modified to provide personal security or individual access control. AMTECH tags are already small enough to be used as access cards, and may soon fit within a standard wallet. This would permit the same system to be used for vehicular and personal access and security. Because an AMTECH tag could be read even if it were inside another object, in might also obviate the need to remove an access card from a briefcase or wallet.

Another exciting potential application requires only a slight modification to existing IVHS offerings. By increasing the amount of information transmitted to a read-write tag (i.e., through an increase in the data rate), the AMTECH system could be used not only to monitor vehicles but to send instructions to be forwarded to some in-vehicle processor. Such instructions could advise the driver about road hazards or, in the future, even control functions of the vehicle itself.

These are applications for the future. Nonetheless, they illustrate the promise and potential scope of systems such as AMTECH's.

III. EXEMPLARY AMTECH PROJECTS

Under the licensing supervision of FCC staff, AMTECH's installations in the U.S. have grown enormously. Moreover, AMTECH has had unique success in foreign markets. The following are representative applications of the system. All the installations listed below are actually in operation. Many further projects are already contracted for or planned.

- Highway

  - Crescent City Connection Bridge, and Lake Pontchartrain Causeway, New Orleans: AMTECH readers are installed in all twelve lanes of the newest bridge spanning the Mississippi River and on six lanes on the Causeway, the world's largest double span bridge. More than 43,500 toll tags have been issued to date for both systems combined (each of which will work on either facility). Over three and a half million tag crossings have been recorded on the Crescent City bridge since January, 1989, with at least 99.9% accuracy. Nearly half of the Causeway crossings (26 miles) are made by toll tag users, and the tag registrations indicate a penetration of the commuter market exceeding eighty percent.

  - Autopistas, Barcelona, Spain: 28 electronic toll collection lanes are installed on 4 separate highways, permitting a single tag to be used on all three roads. Nearly 20,000 tags have been distributed to patrons, and 50,000 more have been ordered for 1993 delivery.

  - Oklahoma Turnpike Authority: The world's largest AVM toll collection system has been installed throughout the Oklahoma Turnpike: 209 lanes on 585 miles of road. To date, over 200,000 tags have been issued, permitting users to continue on the turnpike at highway speeds while an overhead tag reader automatically records and bills their account. Non-tag users, by contrast, must exit the highway for manual toll collection.

  - Esterel-Cote d'Azur Toll Agency, Cannes, France: AMTECH technology has been installed and is operating in 62 lanes of the 155 mile highway traversing the French Riviera. Over 30,000 tagged vehicles use the system nearly 10 million times per year.

  - Dallas North Tollway: AMTECH equipment has been installed in 62 lanes, distributed over 16 toll plazas of the tollway. The system has more than 51,000 tagged vehicles, registering 25 million transactions per year.

  - New York State Thruway: AMTECH's ETC system is being installed on the Thruway beginning in the Rockland/Westchester corridor near New York City, and in the Buffalo area. The system will consist of 21 lanes of toll collection, and the authority made an initial order of 30,000 tags. The 641-mile Thruway, crossing New York State and servicing the New York City-Buffalo region, is the first superhighway and bridge system in the eastern United States to use ETC.

- Texas Department of Transportation-Houston Traffic Monitoring System: AMTECH's system will be used to monitor traffic in the City of Houston and consists of 175 traffic lanes at 136 locations using 1,000 TxDOT tags in addition to 40,000 Harris County toll tags. TxDOT will use AMTECH's radio frequency identification technology to transmit data on traffic conditions within the City of Houston to the Texas Transportation Institute. In turn, the Institute will use the data to provide Houston drivers with: 1) enhanced information on traffic conditions; 2) real time information that will be displayed on variable message signs or broadcast via local radio stations relating to traffic diversions; 3) improved driver safety (by detecting and reducing congestion associated with traffic hazards); 4) real time trip origin/destination information; and 5) improved traffic flow (by utilizing electronic identification tags to monitor interstate and high occupancy vehicle lane traffic volume).

- GA400 Collection System-State of Georgia, USA: AMTECH is providing ETC and closed circuit systems for 18 lanes of the Georgia Route 400 extension near Atlanta under subcontract with Lockheed Information Systems. Unique to this contract is the development of a license plate mounted tag. AMTECH will provide toll collection and video enforcement and surveillance systems. Four lanes will be designated "AVI express" lanes similar to the dedicated lanes at Dallas and New Orleans toll plazas. The Department of Transportation estimates 55,000 vehicles per day will be crossing the plaza in 1993 when the extension opens. An initial quantity of 25,000 tags have been ordered.

- Harris County Toll Road Authority (HCTRA)-Houston, Texas, USA: In October 1992, the Harris County Toll Road Authority, which operates the Sam Houston Tollway and the Hardy Toll Road, installed 69 AVI lanes (fully integrated with Cubic lane equipment). Of the initial 40,000 tags ordered, nearly 17,000 have been distributed to date.

- Railroad

  - North America: AMTECH tags are in use by all North American Railroads, including CSX Transportation, Consolidated Rail Corp., Norfolk Southern Corp., Santa Fe Railroad, Union Pacific Railroad, Trailer Train and Burlington Northern. The railroads have over 1,000,000 tags in place in North America now. As a group, North American railroads are adding tags at a rate of about 90,000 per month.

- Foreign: Several foreign railroads, including the French and Australian systems, use the AMTECH system for rail stock monitoring and/or automatic train control. Some of these products are manufactured in Spain through an AMTECH/ALCATEL joint venture.

- Trucking and Fleet Systems

    - British Petroleum: More than 50 BP terminal fueling sites across the United States are to be equipped with AMTECH readers by the end of this year. The system permits BP to ensure its trucks conform with Department of Transportation, EPA and OSHA standards as they enter the fueling yard. In addition, BP has decided to equip one of its numerous United Kingdom fueling terminals with a pilot truck rack automation system using AMTECH equipment, and based on its experience with the pilot, may decide to extend the system to its other terminals throughout the United Kingdom and Middle East.

    - State of New Mexico: This project, completed in December 1989, involves reader system installations at four sites (eight lanes) on interstate freeways for the State of New Mexico border ports of entry at Gallup and San Jon. Qualified motor carriers who install identification

- Dallas/Fort Worth International Airport: DFW uses AMTECH technology to validate vehicle airport access, control barrier gates, and control vehicular access to security-sensitive areas. More than 2,200 vehicles have been tagged, and over 50 lane installations have been completed.

- Japan Air Lines: The AMTECH system permits JAL, the primary domestic airline carrier, to track aircraft containers at several Japanese airports. Over 4,000 containers can be processed at 8 Japanese airports (including Tokyo Haneda), and the system automatically bills shippers and assigns space in aircraft cargo bays according to safety and aircraft weight and balance criteria.

B

APPENDIX B

AMTECH PREFERRED BAND PLAN

APPENDIX B
(AMTECH PREFERRED BAND PLAN)

A. Part 2 of Chapter 1 of Title 47 of the Code of Federal Regulations is proposed to be amended as follows:

PART 2 - FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

1. The authority citation for Part 2 continues to read as follows:

Authority: Sec. 4, 302, 303, and 307 of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154, 154(i), 302, 303, 303(r), and 307, unless otherwise noted.

2. Section 2.106 is amended by adding "Private Land Mobile (90)" to the FCC use designators in the row from 902-928 MHz in the table and be revising footnotes US218 and US275 to read as follows:

§ 2.106 Table of Frequency Allocations

* * * * *

International table	United States table		FCC use designators	
* * *	Government	Non-Government	Rule Part(s)	Special-Use frequencies
	* * * * *			
* * *	902-928 RADIOLOCATION	902-928	Private Land Mobile (90). Amateur (97).	915 + 13 MHz Industrial, scientific, and medical frequency.
	707 US215 US218 US267 US275 G11 G59	707 US215 US218 US276 US275		

* * * * *

US218 The band 902-928 MHz is available for Location and Monitoring Service (LMS) systems subject to not causing harmful interference to the operation of all Government stations authorized in these bands. These systems must tolerate interference from the operation of Industrial, scientific, and medical (ISM) devices and the operation of Government stations authorized in these bands.

US275 The band 902-928 MHz is allocated on a secondary basis to the amateur service subject to not causing harmful interference to the operations of Government stations authorized in this band or to Location and Monitoring Service (LMS) systems. Stations in the Amateur service must tolerate any interference from the operations of industrial, scientific, and medical (ISM) devices, LMS systems and the operations of Government stations authorized in this band. Further, the Amateur Service is prohibited in those portions of Texas and New Mexico bounded on the south by latitude 30°41′ North, on the east by longitude 104°11′ West, and on the north by latitude 34°30′ North, and on the west by longitude 107°30′ West: in addition, outside this area but within 150 miles of these boundaries of White Sands Missile Range the service is restricted to a maximum transmitter peak envelope power output of 50 watts.

* * * * *

B. Part 90 of Chapter 1 of Title 47 of the Code of Federal Regulations is proposed to be amended as follows:

PART 90 - PRIVATE LAND MOBILE RADIO SERVICES

1. The authority citation for Part 90 continues to read as follows:

Authority: Secs. 4, 303, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303, and 332, unless otherwise noted.

2. Section 90.7 is amended by removing the entry for *Automatic Vehicle Monitoring* and adding a new definition for *Location and Monitoring Service* to read as follows:

§ 90.7 Definitions.

* * * * *

Forward-link: A communications path in an LMS system originating with a base station used to poll location units or to send instructional messages related to the units being located.

Highway beacon: A high power (100 W ERP or less) LMS base station used to identify units passing a specified section of highway and to communicate with such units.

Local-area LMS System: A system using LMS to identify the location of units over a range of 600 feet or less.

Location and Monitoring Service (LMS). The use of non-voice signalling methods from and to location units to make known the location of such units. LMS systems may also transmit status, identify, and instructional messages related to the unites involved. The signalling must occur in the 25-50 MHz, 150-170 MHz, 450-512 MHz, or 902-928 MHz bands and must be an essential element of the determination of the unit's location. Methods that allow the location of the unit to be determined independently of the signalling methods, e.g. dead-reckoning, or the use of other frequencies allocated for radiolocation, e.g. the global positioning satellite service, are not LMS.

Wide-area LMS System: A system using LMS to identify the location of units over an area of at least 5 sq. miles in which a minimum of three base stations is essential to determine the location of the unit.

* * * * *

3. Section 90.101 is revised to read as follows:

§90.101 Scope.

The Radiolocation Service accommodates the use of radio methods for determination of direction, distance, speed, or position for purposes other than navigation. Rules as to

4. Section 90.103 is amended by adding 902-928 MHz to the Table in paragraph (b), by adding new paragraph (c)(31), by removing paragraph (d) and by redesignating existing paragraph (e) as paragraph (d) to read as follows:

§ 90.103 Radiolocation Service.

* * * * *

(b) * * *

Radiolocation Service Frequency Table

Frequency or band	Class of Station	Limitation
* * * * *		
Megahertz:		
* * *		
902 to 928	do	31
* * * * *		

(c) * * *

(31) The 902-928 MHz band is available for LMS operations in accordance with section 90.105. Operations will not cause interference to government stations which operate in these bands and must tolerate interference from industrial, scientific, and medical (ISM) devices and from government stations which operate in these bands.

* * * * *

5. A new Section 90.105 is added to subpart F to read as follows:

§ 90.105 Location and Monitoring Service

(a) These provisions authorize the licensing of systems in the location and monitoring service (LMS). LMS systems utilize nonvoice radio techniques to determine the location of location units. LMS licensees authorized to operate a system in the 902-928 MHz band may serve individuals, federal government agencies and entities eligible for licensing in Part 90.

(b) LMS operations in the 902-928 MHz band will not cause interference to government stations which operate in these bands and must tolerate interference from industrial, scientific, and medical (ISM) devices and from government stations which operate in these bands.

(c) Frequencies for LMS operations are assignable as follows:

(1) Wide-area and local-area LMS systems will be authorized in the 902-928 MHz bands on a shared basis subject to the height

G1D or P0N emission must be received from all existing co-channel licensees using voice emissions within the applicable mileage limits. If there is interference with voice operations and required agreement was not received, or operation was authorized on a secondary noninterference basis, the licensee of the LMS system is responsible for eliminating the interference.

(iii) Frequencies additional to any assigned under paragraph (b)(4)(i) of this section will not be assigned to the same licensee at any stations located within 64 km (40 miles) of any station in which the licensee holds an interest until each of such licensee's frequencies for LMS operation is shown to accommodate not less than 90 percent of the frequency loading requirements specified in paragraph (b)(4)(i) of this section.

(d) Each application to license an LMS system shall include the following supplemental information:

(1) A detailed description of the manner in which the system will operate, including a map or diagram.

(2) For operations requiring more than 1 MHz of bandwidth, the necessary or occupied bandwidth of emission, whichever is greater.

(3) The data transmission characteristics as follows:

(i) The vehicle location update rates:

(ii) Specific transmitter modulation techniques used:

(iii) For codes and timing scheme: A table of bit sequences and their alphanumeric or indicator equivalents, and a statement of bit rise time, bit transmission rates, bit duration, and interval between bits.

(iv) A statement of amplitude-versus-time of the interrogation and reply formats, and an example of a typical message transmission and any synchronizing pulses utilized.

(4) A plan to show implementation schedule during the initial license term.

(e) LMS stations are exempted from the identification requirements of § 90.425; however, the Commission may impose

This device complies with Part 90 of the FCC Rules. Operation is subject to the following conditions: (1) this device may not cause harmful interference to Federal Government operations using this spectrum and (2) this device must accept any interference received from Federal Government operations and from Industrial, Scientific, and Medical devices using this spectrum, including interference that may cause undesired operation.

6. Section 90.179 is amended by revising paragraph (f) to read as follows:

§ 90.179 Shared use of radio stations

* * * * *

(f) Above 800 MHz, shared use on a for-profit private carrier basis is permitted only by SMR. Private Carrier Paging, and LMS licensees. See Subparts F, P, and S of this part.

7. Section 90.203 is amended by adding new paragraph (b)(7) to read as follows:

§ 90.203 Type Acceptance required.

* * * * *

(b) * * *

(7) Transmitters used in LMS systems in the 902-928 MHz band authorized prior to [effective date of rules].

* * * * *

8. Section 90.205(b) is amended by adding the 902-928 MHz band to the table and by adding footnote (13) to read as follows:

§ 90.205 Power.

* * * * *

(b) * * *

Frequency range (megahertz)	Maximum Output power (watts)	Maximum effective radiated power (watts)
* * * * *		
902-928	. . . .	([13])
* * * * *		

[13] The maximum effective radiated power (ERP) of local-area LMS systems highway beacons is 100 W. The maximum ERP of local-area LMS system base stations is 30 W (with a height limitation of 10 meters) and the maximum ERP of LMS portable stations is 10 W. The maximum ERP of local-area mobiles is 1 W. The maximum ERP of wide-area LMS forward links located in the 902-928 MHz band is 625 W per MHz not to exceed 5000 W ERP total, except that forward links located in the 902.000-902.250 and 927.750-928.000 MHz sub-bands may have an ERP of 500 W. Forward links located outside the 902-928 MHz band are subject to the power restrictions under the regulations governing the service in which they are authorized. The maximum ERP of wide-area LMS system mobiles is 50 W and any such mobile shall not transmit for more than 10 ms in any 100 ms period.

Effective radiated power shall be measured as peak power.

* * * * *

9. Section 90.209 is amended by adding new paragraphs (b)(10) and (m) to read as follows:

§ 90.209 Bandwidth limitations.

* * * * *

(b) * * *

(10) The maximum authorized bandwidth shall be 26 MHz and the minimum authorized bandwidth shall be 2 MHz for wide-area LMS systems in the band 902-928 MHz. The maximum authorized bandwidth shall be 26 MHz for local-area LMS operations in the